

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method of supporting multiple encryption schemes over a connection on a network comprising:

transmitting a first request from a source entity to a trusted arbitrator, the first request relating at least in part to establishing a first secure connection between the source entity and a target entity, the target entity being within a local area network (LAN), the LAN coupled to the network and including a connection entity to interact with the trusted arbitrator over the network in setting up the secure connection between the source entity and the target entity;

establishing a second secure connection between the source entity and the trusted arbitrator using a first encryption scheme in response to the first request;

transmitting a second request from a the connection entity to the trusted arbitrator;

transmitting a first response from the trusted arbitrator to the connection entity in response to the second request, the first response being associated at least in part with the first request; and

establishing a third secure connection between the trusted arbitrator and the connection entity using a second encryption scheme in response to the first response.

2. (Currently amended) The method according to claim 1, wherein the trusted arbitrator authenticates with the source entity before the second secure connection using the first encryption scheme is established.

3. (Original) The method according to claim 2, wherein the trusted arbitrator supports multiple authentication schemes and determines, before source entity is

authenticated, whether a desired authentication scheme used by the source entity is supported.

4. (Currently amended) The method according to claim 1, wherein the connection entity authenticates with the trusted arbitrator before the third secure connection using the second encryption scheme is established.
5. (Original) The method according to claim 1, wherein at least one among the second request and the first response conforms at least substantially to a Hypertext Transfer Protocol.
6. (Original) The method according to claim 1, wherein at least one among the first and second requests is directed to a Uniform Resource Locator associated with the trusted arbitrator.
7. (Original) The method according to claim 1, wherein during at least a part of a period between a time of the transmitting of the first request and a time of the transmitting of the first response, the first request is stored in an area associated with the connection entity in the trusted arbitrator.
8. (Original) The method according to claim 1, wherein if the connection entity does not receive the first response within a predetermined period of a time of the transmitting of the second request, the transmitting of the second request is repeated.

9. (Currently amended) A computer readable medium including computer readable instructions encoded thereon for:

transmitting a first request from a source entity to a trusted arbitrator, the first request relating at least in part to establishing a first secure connection between the source entity and a target entity, the target entity being within a local area network (LAN), the LAN coupled to the network and including a connection entity to interact with the trusted arbitrator over the network in setting up the secure connection between the source entity and the target entity;

establishing a second secure connection between the source entity and the trusted arbitrator using a first encryption scheme in response to the first request;

transmitting a second request from a the connection entity to the trusted arbitrator;

transmitting a first response from the trusted arbitrator to the connection entity in response to the second request, the first response being associated at least in part with the first request; and

establishing a third secure connection between the trusted arbitrator and the connection entity using a second encryption scheme in response to the first response.

10. (Currently amended) The computer readable medium of claim 9, further comprising computer readable instructions encoded thereon for authenticating the source entity before the second secure connection using the first encryption scheme is established.

11. (Original) The computer readable medium of claim 10, wherein the trusted arbitrator supports multiple authentication schemes and determines, before the source entity is authenticated, whether a desired authentication scheme used by the source entity is supported.

12. (Currently amended) The computer readable medium of claim 9, further comprising computer readable instruction encoded thereon for authenticating the trusted arbitrator before transmitting the first response.
13. (Original) The computer readable medium of claim 9, wherein at least one among the second request and the first response conforms at least substantially to a Hypertext Transfer Protocol.
14. (Original) The computer readable medium of claim 9, wherein at least one among the first and second requests is directed to a Uniform Resource Locator associated with the trusted arbitrator.
15. (Original) The computer readable medium of claim 9, wherein during at least a part of a period between a time of the transmitting of the first request and a time of the transmitting of the first response, the first request is stored in an area associated with the connection entity in the trusted arbitrator.
16. (Original) The computer readable medium of claim 9, wherein if the connection entity does not receive the first response within a predetermined period of a time of the transmitting of the second request, the transmitting of the second request is repeated.

17. (Currently amended) A system in a computer network ~~having a target entity, a connection entity coupled to the target entity, and an access control mechanism coupled to the connection entity, the system~~ comprising:

a local area network (LAN) including a target entity and a connection entity coupled to the target entity;

an access control mechanism coupled to the computer network and to the connection entity of the LAN to control access to the computer network by entities of the LAN;

a trusted arbitrator coupled to the access control mechanism via the computer network; and

a source entity coupled to the trusted arbitrator via the computer network,
wherein

the trusted arbitrator receives a first request for establishing a first secure connection from the source entity to the target entity, the first request relating at least in part to the target entity,

in response to the first request, a second secure connection is established between the source entity and the trusted arbitrator using a first encryption scheme,

the connection entity transmits a second request to the trusted arbitrator via the access control mechanism,

in response to the second request, the trusted arbitrator transmits a first response to the connection entity, the first response being associated at least in part with the first request, and

in response to the first response, a third secure connection between the trusted arbitrator and the ~~computer network~~ connection entity is established using a second encryption scheme.

18. (Currently amended) The system according to claim 17, wherein the third secure connection between the trusted arbitrator and the ~~computer network~~ connection entity is established between the trusted arbitrator and the connection entity using the access control mechanism.

19. (Cancelled)

20. (Original) The system according to claim 17, wherein the trusted arbitrator authenticates with the source entity before the secure connection using the first encryption scheme is established.

21. (Original) The system according to claim 20, wherein the trusted arbitrator authenticates the source entity by verifying identification information sent by the source entity.

22. (Original) The system according to claim 20, wherein the trusted arbitrator supports multiple authentication schemes and determines, before authenticating the source entity, whether a desired authentication scheme used by the source entity is supported.

23. (Currently amended) The system according to claim 17, wherein the connection entity ~~an entity inside of the computer network~~ authenticates with the trusted arbitrator before the third secure connection using the second encryption scheme is established.

24. (Currently amended) The system according to claim 23, wherein the trusted arbitrator supports multiple authentication schemes and determines, before being authenticated, whether a desired authentication scheme used by the LAN ~~computer network~~ is supported.

25. (Original) The system according to claim 17, wherein the first request is a query that conforms at least substantially to a Hypertext Transfer Protocol, and the first response is a response that conforms at least substantially to a Hypertext Transfer Protocol.

26. (Original) The system according to claim 17, wherein the access control mechanism is a firewall.

27. (Original) The system according to claim 17, wherein the access control mechanism is a proxy server.

28. (Original) The system according to claim 17, wherein the access control mechanism is coupled to the trusted arbitrator at least in part through the Internet.

29. (Previously amended) The system according to claim 17, wherein the source entity is coupled to the trusted arbitrator at least in part through the Internet.

30. (Original) The system according to claim 17, wherein at least one among the first and second requests are directed to a Uniform Resource Locator associated with the trusted arbitrator.

31. (Original) The system according to claim 17, wherein during at least a part of a period between a time of the sending of the first request and a time of the sending of the first response, the trusted arbitrator stores the first request in an area associated with the connection entity.

32. (Original) The system according to claim 17, wherein if the connection entity does not receive the first response within a predetermined period of a time of the sending of the second request, the sending of the second request is repeated.

33. (Original) The system according to claim 17, wherein before a time of sending the first response, the trusted arbitrator sends a notice to the connection entity, said notice being in response to the first request.

34. (Original) The system according to claim 17, wherein the connection entity forwards at least a portion of the first request to the target entity.

35. (Currently amended) A system for establishing a secure connection comprising:

a ~~computer~~ local area network (LAN) employing an encryption scheme, said ~~computer network~~ LAN including a target entity, a connection entity coupled to the target entity, and an access control mechanism coupled to the connection entity;

a trusted arbitrator coupled to the access control mechanism; and

a source entity coupled to the trusted arbitrator, the source entity employing the same encryption scheme, wherein the trusted arbitrator authenticates with the source entity and the connection entity,

the trusted arbitrator receives a first request for establishing a secure connection from the source entity, the first request relating at least in part to the target entity,

the connection entity transmits a second request to the trusted arbitrator,

in response to the second request, the trusted arbitrator transmits a first response to the connection entity, the first response being associated at least in part with the first request, and

in response to the first response, a secure connection between the source entity and the ~~computer network~~ LAN is established using the encryption scheme.

36. (Currently amended) The system according to claim 35, wherein the secure connection between the source entity and the ~~computer network~~ LAN is established between the source entity and the connection entity.

37. (Currently amended) The system according to claim 35, wherein the secure connection between the source entity and the ~~computer network~~ LAN is established between the source entity and the target entity.